

Rhodora

JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

Vol. 15.

November, 1913.

No. 179.

THE HEATHER, *CALLUNA VULGARIS*, ON MARTHA'S VINEYARD.

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So much has been made of the heather growing wild on Nantucket that a sort of distinction has come to that island by reason of this plant. As well might the plural form be used — of these plants — for, in addition to the better known common Heather or ling (*Calluna vulgaris* (L.) Salisb.) two other heaths are found on Nantucket — the Bell Heather (*Erica cinerea* L.) and the Cross-leaved Heath (*Erica tetralix* L.). In respect of the *Calluna* it is to be reported that the island of Martha's Vineyard has equal if not greater claim to honor. Yet so little had this been suspected that when I chanced upon the heather growing there, in far greater profusion and in altogether wilder surroundings than on Nantucket, it seemed by first impression almost like an intrusion on a prerogative of the more seaward island.

Among the botanical elect of Nantucket its heather secrets have long been held in loyal reserve. But for this circumspection it is doubtful if any heather at all would be growing wild there today. It cannot be thought ungracious therefore if I particularize here no more fully as to the Martha's Vineyard locality than to report it as being in pitch pine woods in the southeastern quarter of the island.

An obscure woodland road passes the spot not many rods distant and an abandoned farm house, not yet a ruin, occupies an old clearing not very far away, but the general surroundings are quite uninhabited tracts of scrub oak, and woodland of oak and pine, traversed by sandy cartways and remote from any highway or any cultivated ground. The main growth of the heather carpets the level floor of

the woods over an irregular area some twenty-seven paces in length and twenty-four paces in greatest breadth. No garden spot could show a more perfectly continuous bed of color than here lies hidden among the pines in September when the heather is in full bloom. On three sides it is well screened by thick woodland growth, but from one direction no alert botanist in passing would fail to catch glimpses of its rosy glow through openings among the trees while yet eight or ten rods away. Of the few outlying patches the most distant is about fifty paces from the favored spot; another, thirty-five paces distant, lies quite outside the grove-like tract of pines in the adjoining scrub oak. In September, 1912, it was found that this patch had been discovered and much of it had been torn up and left lying about to die. The main growth, still undisturbed, had evidently been established for many years. The larger pines that gave it partial shade were from twenty to nearly thirty feet in height. When discovered, on September 24, 1909, it was in full flower; on October 10 fresh flowers were still appearing but the mass of bloom had lost its bright color of two weeks before. Few other kinds of plants grew close about it; the most noteworthy were *Cypripedium acaule*, *Hypopitys lanuginosa*, *Monotropa uniflora*, *Vaccinium pennsylvanicum*, *Epigaea repens*, *Pyrola rotundifolia*, *Trientalis americana* and *Carex pennsylvanica*.

This Martha's Vineyard heather appeared so different from the Nantucket plant — more straggling in habit with shorter less tapering racemes of deeper pink and somewhat different flowers and, in effect, glabrous foliage — that it gave me the instant impression of being quite like a different species. Nor was this impression an altogether misleading one. The plant is indeed true *Calluna vulgaris*, that is to say, the typical glabrate form of the species. The Nantucket *Calluna*, on the other hand, proves to be the markedly pubescent form of the plant which by some European botanists has been esteemed a distinct variety or even a valid species. It is the *Calluna vulgaris* var. *pubescens* of Koch (Syn. ed. 2: 547, 1844).

It does not clearly appear from the specimens examined how worthy of distinction from the more glabrous type this pubescent heather may be, or whether the minute pubescence of its younger parts and sometimes even of the leaves, is to be taken as evidence that the two plants readily interblend. The glabrate plant appears to be the prevailing and more widely diffused form in Europe. In the collections at the New York Botanical Garden I find specimens from England, France,

Germany, Hungary and Iceland, the pubescent form appearing from England only. But it is to be noted that it is reported by Schur from Kronstadt (Enum. Pl. Transs. 447, 1866).—“*Calluna vulgaris* b. *pubescens* Koch. (*Erica ciliaris* Hudson [non L.]—*Calluna ciliaris* Schur, herb. Transs.).” Specimens of the glabrate plant from America in the same Herbaria are as follows: Massachusetts — Andover, 1861, ex herb. A. Gray; Tewksbury, 1874, Thos. Morong; Nantucket; Rhode Island — Worden's Pond, Sept., 1894, J. F. Kemp; New Jersey — near Hammondton, Aug., 1891, W. A. Stowell. That the glabrate plant is found also in Newfoundland is clearly shown by the figure in Journ. Bot. 4: 306, 1866, where the American heather was mistakenly proposed as distinct from the European under the name *Calluna atlantica* by Doctor Seemans.

The only notably pubescent specimens seen from any place in America are from Nantucket. There the plant has held its pubescent character from the time of its introduction thirty-six years ago. The evidence is interesting. There is preserved in the Herbarium of Columbia University an old Nantucket specimen, ex herb. O. R. Willis, bearing on the label no date or record other than the name of the collector, Mrs. C. C. Pearson. Mr. Willis seems to have been the first to have reported this heather, and also of *Erica Tetralix* from Nantucket. His note of announcement was published in the Bulletin of the Torrey Botanical Club for December, 1886, and records that the discovery of both species was made that same year by Mrs. Charlotte C. Pearson who had sent him specimens. This establishes beyond question the date and history of the Willis specimen. It is an excellent example of the pubescent form, and was from the same station where that form is found today.

It would seem to follow that no connection is to be supposed between the introduction of this pubescent heather on Nantucket and that of the glabrate form on Martha's Vineyard. There is even good reason for believing that the *Calluna* on Nantucket, even at the time of its earliest discovery there, must have come to the island from two different lines of approach, for both forms of the plant have been found there. A cluster that I came upon on the open plains in June, 1909, far away from the locality of the pubescent plant, was of the glabrate variety. Mrs. Owen has told us (RHODORA, 10: 173–179, 1908) that it has been sought to spread the heather on Nantucket by scattering seed and even by setting out young plants. The existence of this isolated

cluster is perhaps thus to be explained. But there is evidence that the glabrate plant grew on Nantucket long before any effort had been made to introduce the heather there. The Herbarium of Columbia University contains another old specimen of *Calluna* labeled simply "Nantucket" without other record. It belongs among the earlier collections of the heather on that island and is of the glabrate form. It would seem to be most unlikely that both forms had come to the island together from the same place in Europe, and it is therefore to be inferred that Nantucket has received this addition to its flora from at least two sources of origin. Indeed Mrs. Owen believes (*loc. cit.*) that a solitary plant of *Calluna* found on Nantucket in 1880 far away from the locality where it was brought in with European conifers three years before was not of that introduction. How it came there is not less a mystery than is the presence of the heather at the other widely separated localities from Newfoundland to New Jersey where it has been found on the American Continent.

NEW YORK CITY.

TWO NEW SPECIES OF STIGONEMA.¹

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(Plate 105.)

IN some material collected in October, 1909, by Dr. F. D. Lambert of Tufts College, from Chebacco Pond in the town of Essex, Essex County, Massachusetts, there was found very abundantly a blue-green alga, that apparently had not been described before, belonging to the family *Stigonemaceae*. This material was put into formalin and left until November, 1912, when Dr. Lambert and myself secured fresh material from the same place and found the same alga still plentiful. In April, 1913, I visited the pond and found the alga very scarce, but in exactly the same growing condition as in the previous November. It was found free-floating among other algae, chiefly blue-greens, where dead leaves and stems had collected in masses at the edge of the pond. Its filaments form loose, wiry-looking clusters from one to several millimeters in diameter.

¹ Contributions from the Biological Laboratories of Tufts College, No. 55.